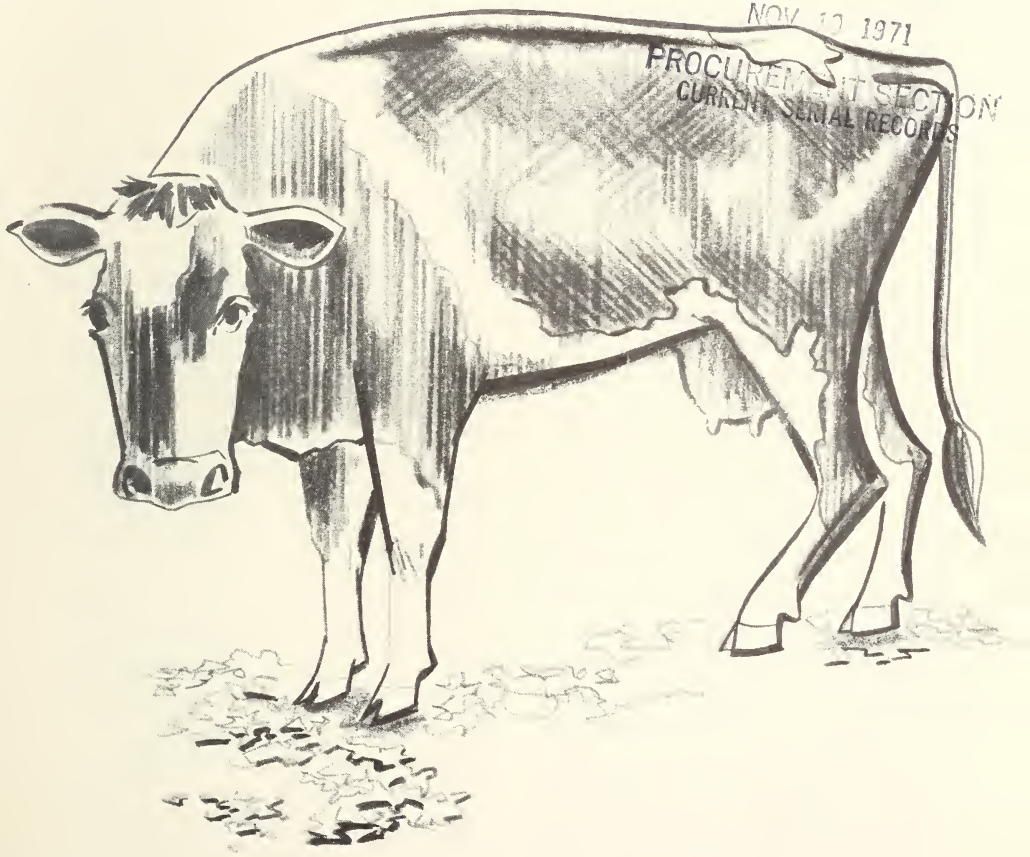
FESCUE FOOT IN CATTLE

What to do about it



U.S. DEPARTMENT OF AGRICULTURE — LEAFLET NO. 546

FESCUE FOOT IN CATTLE

What to do about it

By Robert C. Buckner, *Plant Science Research Division, Agricultural Research Service and Kentucky Agricultural Experiment Station;* and Donald E. LaBore, *University of Kentucky Cooperative Extension Service*

Tall fescue [1] is a valuable pasture grass, but cattle that feed on it occasionally develop a crippling disease known as fescue foot or fescue toxicity.

Both dairy and beef cattle are susceptible to fescue foot. It has not been reported in other livestock. The specific cause of fescue foot is not yet known.

Only a small percentage of animals on fescue show signs of the nutritional disease. Outbreaks can, however, affect many of the cattle on improperly managed pastures during droughts.

OCCURRENCE

Most cases of fescue foot occur among cattle that graze pure stands of tall fescue during late summer, fall, and winter. Generally, the grass has received little fertilizer.

In drought years, the number of cases is relatively high among cattle grazing on fields of fescue where the grass has not been previously grazed or mowed. Such fescue is of poor quality in late fall and winter. Cattle on it are subject to extreme malnutrition if supplemental feed is not provided. Fescue foot is more prevalent in animals suffering from malnutrition.

Tall fescue is adapted to many soils and climates in the United States. Because it grows well on soils of low productivity, this pasture grass has made a major contribution to the agriculture of the South Central and Southeastern States.

The grass may be maintained in legume-fescue mixtures or in pure stands. When fescue pasture is fertilized and well managed, cattle make satisfactory gains.

On pure stands of fescue, young cattle gain 0.8 to 1.5 pounds a day. Cattle on legume-fescue mixtures make gains comparable to other cool season legume-grass mixtures.

Cattle grazing fescue should have provided — free-choice — adequate amounts of salt, bonemeal, and limestone and perhaps a mineral supplement containing minor elements.

---

[1] *Festuca arundinacea* Schreb.

BN–28082

Cow at left shows typical signs of fescue foot—stiffness, loss of weight, and lameness in hind feet. Cow at right is unaffected, although she grazed the same fescue pasture.

The disease also occurs in cattle fed fescue hay or silage.

On the other hand, few cases of fescue foot have been reported in cattle that are rotated on well-managed pastures of fescue-legume mixture or vigorously growing stands of pure fescue.

The disease may appear 10 days to several weeks after cattle start to feed on fescue. Cattle are most susceptible to fescue foot when they are first placed on fescue pasture.

The following varieties of fescue have produced the cattle disease:

- Ky. 31, grown widely in the South Central and Southeastern United States.
- Alta, grown widely in the West and Northwest.
- Kenwell, a variety released in 1965 that is adapted to the same area as Ky. 31.

Limited testing indicates that Kenwell and Ky. 31 affect cattle similarly under comparable climatic and pasture conditions. These two varieties are similar in nutrients, but Kenwell is more palatable and resistant to leaf diseases.

SIGNS

Usually, the first signs of fescue foot are general stiffness and soreness. Affected cattle are slow to move and refuse to graze. They become dull and listless as their rate of breathing increases. They lose weight rapidly.

Cattle soon become lame in the hind feet. Hoofs may split.

At this time fescue foot may be confused with foot rot. Cattle with foot rot usually develop distinct swelling and inflammation in the space between the claws. There is no such swelling in fescue foot.

As fescue foot progresses, dry gangrene develops in the foot tissues. Skin around the hoof breaks; a definite line marks the affected

area. In severe cases, sloughing of foot tissue occurs at this time.

The switch, the end of the tail, and—in rare cases—the tip of the ears may slough off.

CARE OF AFFECTED CATTLE

No medication is effective for cattle with fescue foot. In severe cases where sloughing has occurred, animals should be destroyed for humane reasons.

Cattle usually recover completely if they are removed from fescue pasture or fescue hay and are given other feed as soon as the first signs of the disease appear.

After they recover, cattle may be safely returned to fescue pasture if the grass is making satisfactory growth. Check these cattle daily for signs of a recurrence of the disease.

Rotate pastures every 10 days for cattle that have recovered from fescue foot (see pasture rotation, p. 5).

PREVENTION THROUGH PASTURE MANAGEMENT

Proper management of fescue pasture is the best way to prevent fescue foot.

Before planting fescue, have the soil tested and follow recommendations to correct deficiencies of lime, phosphorus, or potassium. A maintenance fertilization each year of phosphorus and potassium may be required by some soils for best production.

BN–28080

Because splitting of the hoof (above) is common in both diseases, fescue foot may be confused with foot rot in cattle. In fescue foot, tissues between the claws remain normal; in foot rot, however, tissues between the claws become swollen.

BN—28081

Legume-fescue pasture has a favorable mixture of tall fescue and clover.

Pasture Rotation

Pasture rotation will help prevent fescue foot during severe drought when forage is badly needed. To rotate pastures: Put cattle on other forage for 10 days; follow with fescue pasture for the next 10 days. Continue pasture rotation at 10-day intervals until the drought breaks.

Legume-Fescue Pasture

For legume-fescue pasture, use one or more of the following legumes: Alfalfa; red, alsike, or sweet clover; or annual lespedezas.

Fescue often produces seed heads, even when it is stocked heavily in the spring. To keep fescue succulent and to prevent seed-head formation, clip it regularly. Feed the excess as hay.

Use fertilizer and controlled grazing to maintain a legume level between 25 and 60 percent in fescue pastures. Do not apply nitrogen fertilizer on legume-fescue pasture.

Pasture Renovation

Legumes may disappear from fescue stands because of low soil fertility, competition from fescue, or unfavorable weather. Legumes can be reestablished in early spring or fall. Generally, spring seedings are more satisfactory; fall plantings are frequently affected by severe droughts.

To renovate legume-fescue pastures, take the following steps:

1. Have the soil tested and follow the recommendations. Legumes need medium to high levels of

phosphorus and potassium and a pH between 6.0 and 7.0.

2. Graze or clip grass closely.

3. Disk or cultivate to destroy one-third to one-half of the sod.

4. Inoculate legume seed.

5. Distribute seed evenly over the field and cover lightly.

Graze fescue moderately during the spring to prevent undue competition to young legume plants.

Pure Fescue Pasture

Fescue sods produce highest yields of seed when maintained as pure stands and when top-dressed with 50 to 60 pounds per acre of nitrogen in December.

You can also top-dress applications of nitrogen through March 1 for satisfactory yields, although results will not be as high as in December. Nitrogen applied at the above rate after March 15 causes lodging, excessive growth, and lower seed yields.

Foliage on fescue seed fields can be efficiently utilized when the grass accumulates during the summer and early fall. It will provide excellent pasture from the first frost until early April.

Livestock should be removed in early April to permit the development of another seed crop.

After seed harvest, clip fescue and remove stemmy foliage. Several methods are available for removing growth—one of the most efficient is the round baler. The foliage may be left where dropped when baled in this manner. Round bales will remain in good condition into the winter. The hay will be utilized by livestock along with the accumulated summer and fall growth.

If pure stands are continually used as pasture, apply 30 to 50 pounds per acre of elemental nitrogen in March, September, and December. Fertilization will keep fescue growing with full strength.

To develop good winter pasture, graze fescue or mow it for hay until midsummer. Then let it accumulate until after the first frost before grazing.

Acknowledgment is made to E. N. Fergus, Kentucky Agricultural Experiment Station, for recommendations on pasture renovation.

Washington, D.C. Revised October 1971

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price 10 cents
Stock Number 0100-1453

U.S. GOVERNMENT PRINTING OFFICE: 1971 O—437-576